Computer Associates®

BrightStor® Solutions for Microsoft Exchange

Data Availability and Storage Management for Microsoft Exchange

Email has become an indispensable tool for all levels of business communication, including intracompany memos, business-to-business, business-to-consumer and just about every other kind of person-to-person communication. Since this email can contain information vital to the operation of the business, it's critical to protect it. It's also critical to make sure that email systems remain available. When email systems stop, employee productivity can significantly drop or stop, and the costs to the business can mount quickly.

Today, companies of all sizes choose Microsoft Exchange as their email server of choice. Keeping Exchange itself and its related data available requires expertise. However, a large proportion of this intelligence can be automated with the right software, such as BrightStor® solutions from Computer Associates International, Inc. (CA).

Protecting and Providing Access to Crucial Data

Because Exchange has become a critical business application, its data must be protected and available to the users who rely on it. Increases in the number of users, the amount of email they generate and required storage capacity, coupled with constant changes in hardware and software technology, make it a challenge to keep Exchange truly protected and available. To minimize the risk of data loss, a backup and restore solution is a necessity. Application availability is also a high priority, and the acceptable level of availability varies depending on the needs of the organization and the amount it's willing to invest to attain greater levels of availability.

The need for data and application availability 24 x 7 x 365 is fast becoming a business reality for some. Organizations that need this level of accessibility and availability cannot tolerate scheduled downtime or even extended periods of slow system response caused by traditional backup methods.

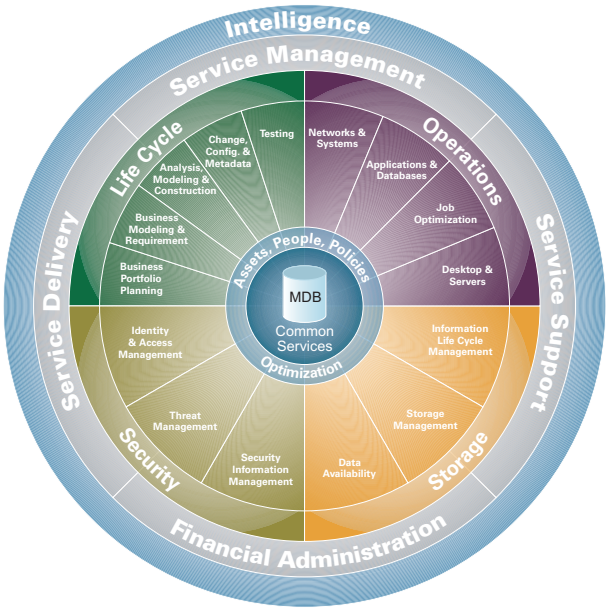
Another key issue related to availability is how quickly an organization can recover from a physical disaster in its data center. Off-site storage of backups typically comes into play here, along with advanced replication technologies. Automatically replicating data locally or remotely can minimize downtime but can require significantly more hardware and software, depending on the approach taken.

Clearly, the ideal solution to these challenges must incorporate both a well-defined, coordinated plan and effective technology that can support the organization's overall business goals.

Offering Expertise Beyond Storage

As the management software experts for more than 28 years, we at CA recognize that storage management doesn't exist in isolation. It's part of an overall IT infrastructure that covers many disciplines. Your information and data are only as available as the server on which they reside and the network that supports them. They're only as secure as the systems that control access to them. They're only as reliable as the applications used to create and modify them.

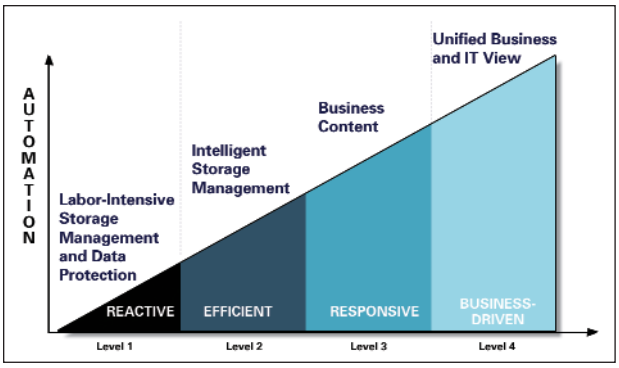
With a growing awareness of these interrelationships in the IT infrastructure, organizations are moving away from viewing storage management as a number of disparate tactical point products to an understanding of the need to implement strategic management solutions focused on delivering value to the business.



A Business-Oriented View of IT

Currently distinct disciplines — operations, storage, security, life cycle and service management — should be integrated tightly to optimize the performance, reliability and efficiency of enterprise IT environments. CA is developing its products to interact with each other, leveraging common services (that is, software components that perform reusable functions across multiple applications), and developing an integrated management schema that will provide a unified view of all aspects of the enterprise and how they relate to business activities and needs. This is the foundation for a truly business-centric IT organization.

With comprehensive, cross-disciplinary information at their fingertips, IT organizations will be able to fully understand how all IT resources are being used across their organizations, offer services tailored specifically to meet the needs of individual departments and even provide executives with feedback about exactly how IT costs are being incurred. All this enables managers to make better decisions about how to direct business activities and assets, improve overall operational efficiency and apply existing resources more effectively.



Information Management Maturity Model

While achieving a completely unified, business-centric IT organization is a strategic goal, it's one that will be accomplished in phases. CA's Information Management Maturity Model maps out a strategy for moving from the most basic level to the most advanced, with each higher level delivering increased alignment between IT and the needs of the business.

An Innovative Approach to Email Management

Advancing to the next level begins with intelligent storage management. In working closely with our customers for many years, we've developed a process for managing all kinds of data, including email, in a way that focuses on the value of that data to the business. It aligns IT activities with business goals, and helps organizations determine what they really need to archive and optimizes network performance by eliminating unnecessary backup activities.

This process entails four steps:

- **Identifying** your current business processes and data and storage assets
- **Classifying** those processes and assets based on their business value
- **Defining** storage policies and procedures to support business requirements
- **Automating** the defined policies and procedures

In the context of email, the first step includes identifying all the email being generated by your organization and the assets available to store that email.

The second step involves determining the business value of that email and the related storage assets, and classifying them accordingly. This includes ascertaining how important certain types of email are to the overall objectives of the organization and how quickly the email needs to be accessed, as well as how long it needs to be retained to comply with business needs and government regulations. For example, email generated by the CEO might have to be retained longer than the email generated by rank-and-file employees.

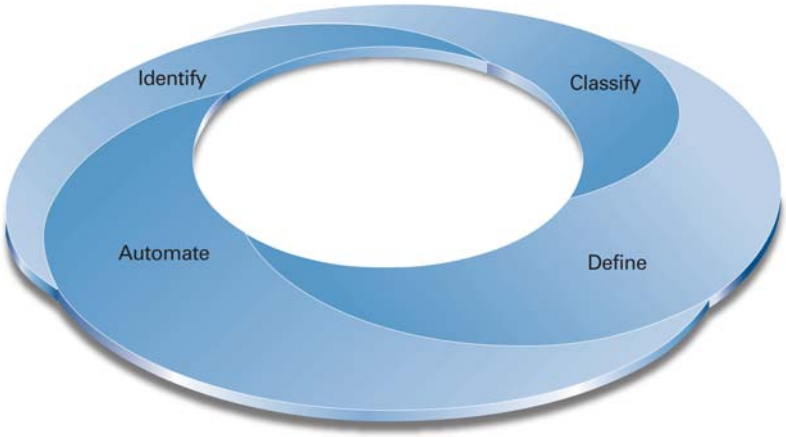
After you have classified your email and storage assets, you can define policies and procedures for managing them appropriately. For example, you might determine that some email must be backed up daily and retained for three years, while other email can be backed up weekly and deleted after six months. You might choose to keep multiple copies of critical email on different

Exchange is a mission-critical application and its availability and reliability are necessary to support daily business activities. By providing exceptional backup and recovery, data and application availability, and storage resource management, BrightStor solutions meet the challenges of protecting and managing your Exchange environment.

types of media to mitigate the risk of media failure or in different physical locations to maintain business continuity in case of a catastrophic event.

Finally, to reduce administrative overhead and the potential for human error, you can leverage automation to take action based on your established policies. For example, you can schedule backups to occur automatically at predefined intervals.

The process of identification, classification, definition and automation is not a one-time event, but rather an ongoing activity. As staff members change roles and other events occur, the business value of their email changes as well, and it must be handled appropriately. All this requires continual evaluation of your organization's needs.



CA's Process for Intelligent Storage Management

BrightStor Solutions for Microsoft Exchange

CA offers a number of BrightStor solutions that support this approach to intelligent storage management and address the storage challenges associated with Exchange:

- Reliable backup without stopping access to Exchange
- Spam and virus protection
- Optimum performance and space utilization for Exchange
- Regulatory compliance
- Policy compliance
- Migrating to the latest version of Exchange
- Maximizing Exchange uptime

Reliable Backup Without Stopping Access to Exchange

For any business-critical data, you need to make sure that you have a complete and reliable backup from which you can restore when required. Like many advanced applications, Exchange is made up of a large number of files that are continually being written to and read from. If these files were backed up one at a time, the resulting set of files would not be from the same moment in time, and there would be a significant chance that they would not be restorable.

BrightStor® ARCserve® Backup for Windows backs up all parts of the Exchange system in such a way that the backed up data can be effectively restored. In addition, this backup can take place while the system is being actively used; there's no need to stop access to Exchange to perform the backup.

BrightStor ARCserve Backup has also been optimized to deliver very high-performance backup and restore of the Exchange system while minimizing the amount of system resources being used to perform these tasks. This helps to ensure minimum impact on the Exchange server and, therefore, minimum impact on the users.

Spam and Virus Protection

Email has become one of the most frequently targeted ways into a company for malicious attacks. CA's security products — including *e*Trust™ Antivirus and *e*Trust™ Secure Content Manager — provide robust protection against security threats to Exchange servers. In addition, CA's BrightStor and *e*Trust™ solutions integrate seamlessly to provide complete threat protection for the Exchange environment. BrightStor ARCserve Backup includes built-in *e*Trust Antivirus technology to automatically scan for and cure viruses during the backup and restore process. When you use the complete *e*Trust Antivirus solution, this kind of protection is extended to real-time checking of every file and email.

Optimum Performance and Space Utilization for Exchange

Exchange servers often manage the emails of hundreds or even thousands of employees. Many of these employees receive and store the exact same email and attachments. The BrightStor® ARCserve® Backup Agent for Microsoft Exchange Premium Add-on leverages a technology known as single-instance store (SIS) that intelligently identifies multiple copies of the same email and attachments across all mailboxes and makes a single backup copy of these. This can have a dramatic effect on the size of the backup sets and, subsequently, improve backup and restore performance.

The BrightStor® Storage Resource Manager Option for Microsoft Exchange also enables you to map each message stored to the volume on which it resides. It automatically queries distributed Exchange databases and alerts IT staff to problems before critical data is at risk. This solution collects high-level, storage-related information on email, including departments, servers, storage groups, mailbox and public stores, public and private folders, and user mailbox properties. Capacity threshold monitoring, alert notifications and problem remediation for storage-related error detection are also provided.

Regulatory Compliance

From the SEC to the FDA to the U.S. Congress, as well as worldwide bodies, government entities have recently established additional regulations that dictate how business information is stored, protected and accessed. Many of these regulations are considerably more stringent than standard business practices, requiring a retooling of IT processes and systems. Since the rules were introduced with multiyear timelines, many organizations concentrated on more immediate issues. However, due to impending deadlines, the risks of noncompliance and the specter of enforcement are fast becoming a reality. In many cases, the U.S. government and other governments consider email a business record, thereby raising its retention, protection and accessibility requirements to new levels. Rather than being purged on a regular basis, email must now be preserved, introducing various IT problems.

BrightStor solutions can aid the process of archiving and legal discovery. For example, the BrightStor ARCserve Backup Agent for Microsoft Exchange Premium Add-on supports search-based restores at the mailbox, folder and message levels. You can search for a particular phrase within the titles of messages, and once you have found all the email that meet your criteria, you can easily restore them.

With BrightStor, you can also use write-once, read-many (WORM) media. This special media, which can be written to and not erased, is ideal for regulatory compliance since a complete list of every piece of data ever written to the media would always be available. In contrast, media that allows erasures and overwrites could potentially have been changed.

Policy Compliance

While regulatory compliance is a legal requirement imposed on all organizations, policy compliance refers specifically to those policies that a company imposes on itself. For example, a company might choose to back up only specific mailboxes, folders or attachments. The BrightStor ARCserve Backup Agent for Microsoft Exchange Premium Add-on supports this form of compliance as well, enabling you to specify which mailboxes and folders to back up or exclude, and the maximum size of attachments to back up. Having this kind of flexibility can not only help you comply with company policies, but also gives you better control over how quickly your storage capacity requirements grow so that you can postpone capital investments in additional storage hardware.

Migrating to the Latest Version of Exchange

Many businesses today are still running older versions of Exchange (including Exchange 5.5 and Exchange 2000) and could benefit from the many new features contained in Exchange 2003. However, upgrading can be complicated and time-consuming, and many organizations have delayed this move as long as possible. Since Microsoft will soon be dropping support for Exchange 5.5, many organizations now need to migrate as quickly, efficiently and painlessly as possible.

The BrightStor ARCserve Backup Agent for Microsoft Exchange Premium Add-on includes migration support to help you rapidly and completely migrate all parts of the Exchange data set to the latest version of Exchange, thereby cutting the time, effort and cost of migration dramatically.

Maximizing Exchange Uptime

Organizations that depend on Exchange to support business communication often require 24 x 7 availability of both the application and its associated data. Application or server failure can disrupt that communication and result in greatly reduced productivity and even lost business opportunities.

By replicating Exchange and the email it manages on a secondary server in real time, BrightStor® High Availability provides continuous access to this critical application at a fraction of the cost and complexity of clustering. When a failure occurs, BrightStor High Availability instantly and transparently switches users to the secondary server, eliminating any downtime or interruption of service. The secondary server can reside anywhere in the network — in another building, another city or another country — providing an even greater degree of reliability. Once the primary server is repaired or replaced, you can easily transfer users back to it. You

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can even use the failover capabilities of BrightStor High Availability to enable scheduled maintenance on the primary server.

A Comprehensive Storage Solution for Exchange

Exchange is a mission-critical application and its availability and reliability are necessary to support daily business activities. By providing exceptional backup and recovery, data and application availability, and storage resource management, BrightStor solutions meet the challenges of protecting and managing your Exchange environment.

About CA

Computer Associates International, Inc. (NYSE:CA), the world's largest management software company, delivers software and services across operations, security, storage, life cycle and service management to optimize the performance, reliability and efficiency of enterprise IT environments. For more information, please visit **ca.com**.

BrightStor Solutions for Microsoft Exchange

Product	Description
BrightStor ARCserve Backup for Windows	World-class backup and recovery for Exchange
BrightStor ARCserve Backup Agent for Microsoft Exchange	Protection for Exchange databases and database objects; remote management of Exchange database, mailbox and public folder backups; and flexible scheduling capabilities
BrightStor ARCserve Backup Agent for Microsoft Exchange Premium Add-on	Document-level backup and restore; single-instance storage support; increased efficiency for backup jobs; migration support for different versions of Exchange; enhanced cluster support; and job continuation in case a job is interrupted
BrightStor High Availability	Continuous, real-time application and data replication for Exchange
BrightStor Storage Resource Manager	A comprehensive view of the complete Exchange environment, plus extensive monitoring, reporting, analysis, alerting, forecasting and scheduling capabilities
BrightStor Storage Resource Manager Option for Microsoft Exchange	Performance optimization for Exchange; centralized monitoring of operations; analysis and optimization to reduce backup failures; and detailed, storage-related information from the server level to the mailbox level, including public and private folders

For more information, call 1-877-246-3674 or visit ca.com/brightstor

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